CLAIMS:

1. A method for altering the differentiation status of a mammalian cell comprising:

contacting a nucleic acid molecule containing the sequence set forth in SEQ ID NO:1 or SEQ ID NO:2, with said cell, wherein said molecule is capable of entering the cell; and

culturing said cells whereby the differentiation status of the cell is altered.

2. The method of claim 1, wherein the differentiation status of said cell after culturing indicates that said cell is a neural progenitor cell.

3. The method of claim 1, wherein the nucleic acid contains a base other than A, U or a derivative thereof, at the position immediately 5' to the sequence of SEQ ID NO:1.

4. The method of claim 1, wherein the mammalian cell is a human cell.

5. The method of claim 1, wherein the differentiation status of the cell is determined by a change in expression level of a differentiation marker.

6. The method of claim 5, wherein the differentiation marker is selected from the group consisting of a *p-sept* protein, a *g-sept* protein, an *n-sept* protein, a nestin protein, a cyc D2 protein, and fragments and combinations thereof.

7. A cell or cell line produced by the method of claim 1.

8. A method for isolating a protein comprising:

contacting biological material containing said protein with a nucleic acid molecule comprising the sequence set forth in SEQ ID NO:1 or SEQ ID NO:2; and

separating protein that binds to said nucleic acid molecule from other components of the extract.

9. The method of claim 8 wherein the nucleic acid molecule is bound to a solid support.

10. An isolated complex comprising a protein that binds to a nucleic acid molecule containing the sequence of SEQ ID NO:1 or SEQ ID NO:2.

11. The complex of claim 10 wherein the protein is selected from the group consisting of a *p-sept* protein of approximately 16 kDa, a *g-sept* protein of approximately 23 kDa, an *n-sept* protein of approximately 29 kDa, and fragments, and combinations thereof.

12. An antibody or antibody fragment that specifically binds to the complex of claim 10.

13. A diagnostic kit comprising the antibody or antibody fragment of claim 12.

14. A method for producing a cell with an altered differentiation status comprising:

contacting a nucleic acid molecule comprising the sequence set forth in SEQ ID NO:1 or SEQ ID NO:2 with said cell wherein the molecule is capable of entering the cell; and

culturing the cell whereby the differentiation status of the cell is altered.

15. The method of claim 14, wherein before culturing the cell has the differentiation status of a stem cell and after culturing the cell has the differentiation status of a neural progenitor cell.

16. The method of claim 14, wherein the molecule contains a base other than A, U or a derivative thereof at the position immediately 5' to the sequence of SEQ ID NO:1.

17. The method of claim 14, wherein the differentiation status of the cells is determined by a change in the level of a differentiation marker.

18. The method of claim 14, wherein the differentiation marker is selected from the group consisting of a *p-sept* protein, a *g-sept* protein, an *n-sept* protein, a nestin protein, a cyc D2 protein, and fragments and combinations thereof.

19. A cell or cell line produced by the method of claim 14.

20. A method of treating a disease comprising:

contacting a nucleic acid molecule containing the sequence set forth in SEQ ID NO:1 or SEQ ID NO:2 to a cell whereby the differentiation status of said cell is altered which thereby ameliorates a symptom of said disease.

21. The method of claim 20, wherein the cell is a stem cell or a progenitor cell.

22. The method of claim 20, wherein the cell is a neural cell.

23. The method of claim 20, wherein the altered cell generates a homogeneous population of such cells for transplantation.

24. The method of claim 20, wherein the disease is a CNS disorder, a neuro-degenerative disease, or a traumatic brain injury.

25. A pharmaceutical composition comprising: an isolated nucleic acid molecule comprising the sequence set forth in SEQ ID NO:1 or SEQ ID NO:2, wherein the molecule is capable of entering a cell and altering the differentiation status of said cell.

26. The composition of claim 25 further comprising one or more pharmaceutically acceptable carriers.

27. The composition of claim 25, wherein the nucleic acid molecule comprises DNA, RNA or PNA.

28. The composition of claim 25, wherein the cell is a neural cell.

29. The composition of claim 25, wherein the molecule contains a base other than A, U or a derivative thereof at the position immediately 5' to the sequence of SEQ ID NO:1.

30. The composition of claim 25, wherein the molecule is capable of altering a cellular function associated with septamer activity.

31. The composition of claim 30 wherein the cellular function associated with septamer activity is a differentiation status of the cell.

32. The composition of claim 25 wherein the cell is a neural cell.

33. The composition of claim 32, which is administered to a patient with a neuro-degenerative disease or a traumatic brain injury.